

The Quadratic Formula

Solve each equation using the quadratic formula. Write solutions in simplest form.

1. $x^2 + 5x + 4 = 0$ _____

2. $y^2 - 2y - 8 = 0$ _____

3. $2z^2 - 3z + 1 = 0$ _____

4. $6x^2 + 5x - 4 = 0$ _____

5. $y^2 + 3y - 3 = 0$ _____

6. $5x^2 + 7x + 3 = 0$ _____

7. $x^2 + x = 6$ _____

8. $y^2 - 13y = 48$ _____

9. $5z^2 = 8z - 6$ _____

10. $3y^2 = 6y - 8$ _____

11. $x^2 - 49 = 0$ _____

12. $2y^2 + 5y = 0$ _____

Solve each equation using the quadratic formula. Write the solutions in decimal form, to the nearest hundredth.

13. $x^2 + 3x - 3 = 0$ _____

14. $x^2 - 4x + 1 = 0$ _____

15. $4y^2 - 6y - 3 = 0$ _____

16. $9y^2 - 6y - 7 = 0$ _____

Application

17. **Number Theory** Find a number such that 35 less than its square is twice the original number.

MIXED PRACTICE

Solve by factoring.

18. $2x^2 - 3x = 0$ _____

19. $2y^2 + y - 10 = 0$ _____

Solve by completing the square.

20. $z^2 - 5z - 14 = 0$ _____

21. $2x^2 - 4x - 3 = 0$ _____

Solve by using the quadratic formula.

22. $6y^2 - 5y + 1 = 0$ _____

23. $z^2 + 3z + 9 = 0$ _____